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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,151	12/18/2001	Roger S. Cubicciotti	031676.0322	7118

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HUNTON & WILLIAMS
INTELLECTUAL PROPERTY DEPARTMENT
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WASHINGTON, DC 20006-1109

EXAMINER

SNAY, JEFFREY R

ART UNIT	PAPER NUMBER
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1743

12

DATE MAILED: 06/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-12

Office Action Summary

Application No.

10/020,151

Applicant(s)

CUBICCIOTTI, ROGER S.

Examiner

Jeffrey R. Snay

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 50-54 is/are pending in the application.
- 4a) Of the above claim(s) 1,11,15,22,31,43-49 and 55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 50-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 50-54 in Paper No. 10 is acknowledged. The traversal is on the ground(s) that the separately claimed inventions are merely different embodiments of providing a conversion means for processing light. This is not found persuasive because each embodiment operates in a functionally different manner, for a different purpose, as explained in the grounds for restriction. Applicant further traverses the restriction on the grounds that examination of all the recited inventions would not impose a serious burden on the examiner. This also is not found persuasive because each claimed invention is classified in a different class and/or subclass. As evidenced by the divergent classification, the requisite search for the different claimed inventions would require non-overlapping areas within the classification system.

The requirement is still deemed proper and is therefore made FINAL.

Drawings

2. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. The pending claims are directed to a system, comprising particular structural elements oriented in a particular relationship with one another so as to operate in the recited manner. Such extent of structural claim language to define a system is incomplete absent an adequate illustration to depict the

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claimed system. Applicant is required to furnish a drawing under 37 CFR 1.81. **No new matter may be introduced in the required drawing.**

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 50-53 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kane.

Kane discloses an optical sensor that comprises all of the presently recited elements. See particularly figures 3 and 4 of Kane disclosing a light source (12), a conversion means (19) which incorporates a tethered pair fluorescence energy indicator, a light emission detector (13) and a fiber optic waveguide communicating the light source, conversion means and light detector, in sequence. In accordance with the specification, the presently recited "conversion means" operates to excite a first fluorophor, which excitation emission effects excitation of a second acceptor fluorophor. Since the tethered energy transfer pair of fluorophores in Kane operated in the same manner (see e.g. Figure 2), the indicator composition of Kane fully anticipates the presently recited conversion means. Furthermore, since the electromagnetic radiation

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of light is inherently comprised of photons, the limitation of instant claim 53 is inherently satisfied by Kane's disclosure of transfer of emitted light to the detector.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Waterbury et al in view of Hendrix.

Waterbury et al disclose a method by which phycobilisomes are irradiated with ultraviolet and visible light to induce fluorescence, and the fluorescence emission monitored to produce the absorption and emission spectra of the phycobilisomes. See column 8, lines 48-58 and Figure 2. Waterbury et al however fail to disclose the particular optical structure utilized to produce the above-noted emission spectra.

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Hendrix discloses an apparatus suited to illuminating and monitoring fluorescent emissions for phycobiliproteins, the fluorescent components of phycobilisomes, which apparatus includes a light source and detector communicating with the fluorescing material via optical fibers. Since Waterbury et al are silent as to the apparatus utilized for performing the optical analysis disclosed, it would have been obvious for one of ordinary skill to look to the prior art for known, conventional optical systems suited for the purpose of Waterbury et al. Thus, it would have been obvious to provide a light source and light detector, each communicating with the fluorescing material via fiber optic waveguides as per the teaching of Hendrix, in order to perform the spectral analysis disclosed by Waterbury.

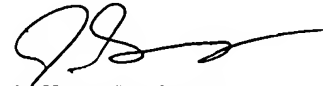
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as general background material related to applicant's field of endeavor.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. Snay whose telephone number is (703) 308-4032. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (703) 308-4037. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Jeffrey R. Snay
Primary Examiner
Art Unit 1743

jrs
June 16, 2003